



Llywodraeth Cymru  
Welsh Government

STATISTICS

# Coronavirus (COVID-19) infection survey (positivity estimates): 4 to 10 April 2021

Analysis of the proportion of people testing positive for  
COVID-19 for 4 to 10 April 2021.

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Antibody data for Wales is now published fortnightly in a separate release.

The Coronavirus (COVID-19) Infection Survey (CIS) is run across the whole of the UK and aims to estimate:

- how many people have the infection over a given time (positivity)
- how many new cases occur over a given period (incidence)
- how many people have antibodies to COVID-19

The survey helps track the extent of infection and transmission of COVID-19 among people in private residences, referred to as the **community population**.

## Proportion of people in Wales who had COVID-19

For the week of 4 to 10 April 2021 it is estimated that an average of 0.11% of the **community population** had COVID-19 (95% **credible interval**: 0.05% to

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0.20%).

This equates to around 1 in 920 individuals (95% credible interval: 1 in 2,080 to 1 in 510), or an estimated 3,300 people in total (credible interval: 1,500 to 6,000).

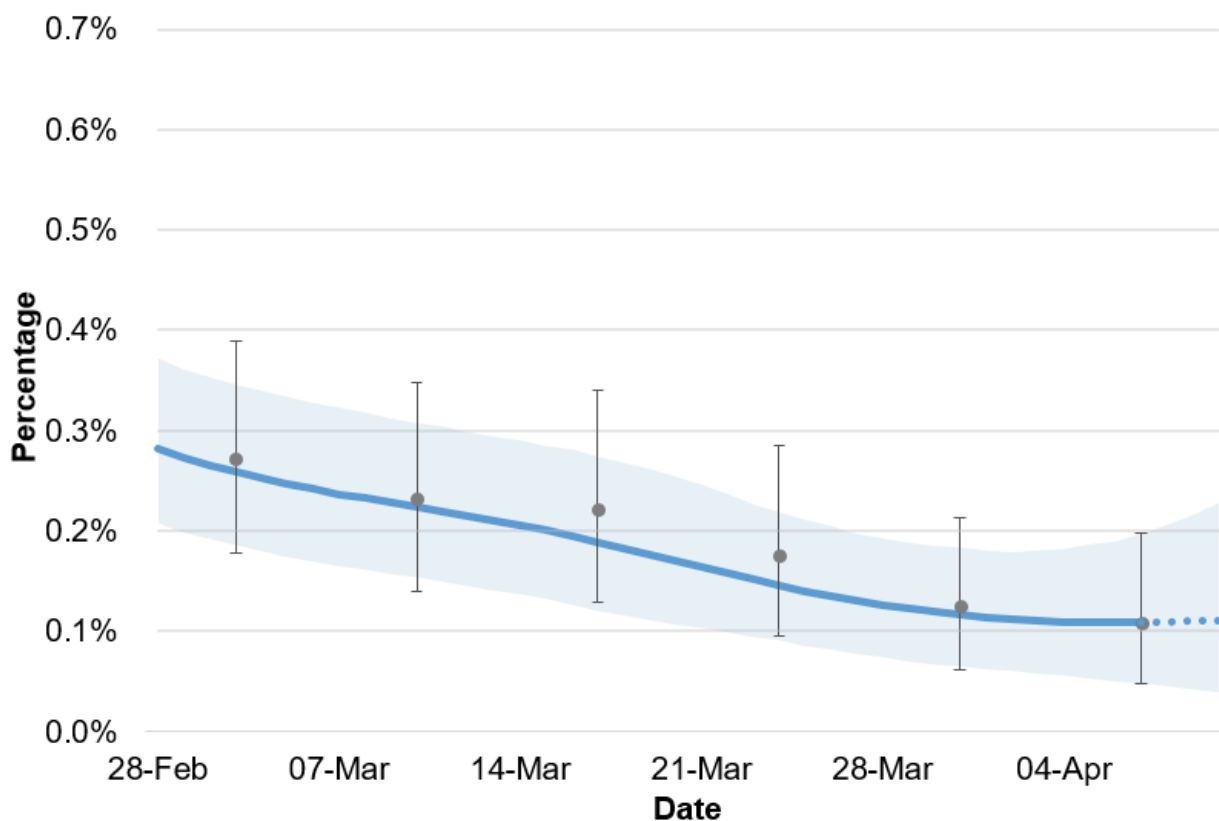
The percentage of people testing positive has decreased in Wales in recent weeks.

Since the estimates are based on a relatively low number of positive tests, there is some uncertainty and the results should be interpreted with caution.

Further information on the classification of positive cases can be found on the [ONS website](#).

Please note that there is a greater lag in data from the infection survey than from other sources such as [Public Health Wales](#).

## Chart 1: Official estimates of the percentage of the population in Wales testing positive for the coronavirus (COVID-19) on nose and throat swabs since 28 February 2021



Source: Coronavirus (COVID-19) Infection Survey, ONS

The blue line and shading represent the modelled trend and 95% credible intervals based on the latest data. The point estimate and error bars are the official estimates published at the time. Estimates for the last few days of the series, shown as dashed lines in the chart, have more uncertainty.

Since January 2021, we have reported on the percentage of people testing positive compatible with the new UK variant that was identified in mid-November. Due to the continued decrease in overall percentages testing positive for COVID-19 across the UK, we have removed the new UK variant chart from this publication. The data will continue to be published in the accompanying [dataset on the ONS website](#).

Trends in different variants will continue to be monitored and the chart will be

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reintroduced if there is a variant that appears to be affecting the trends in the percentage of people testing positive for COVID-19.

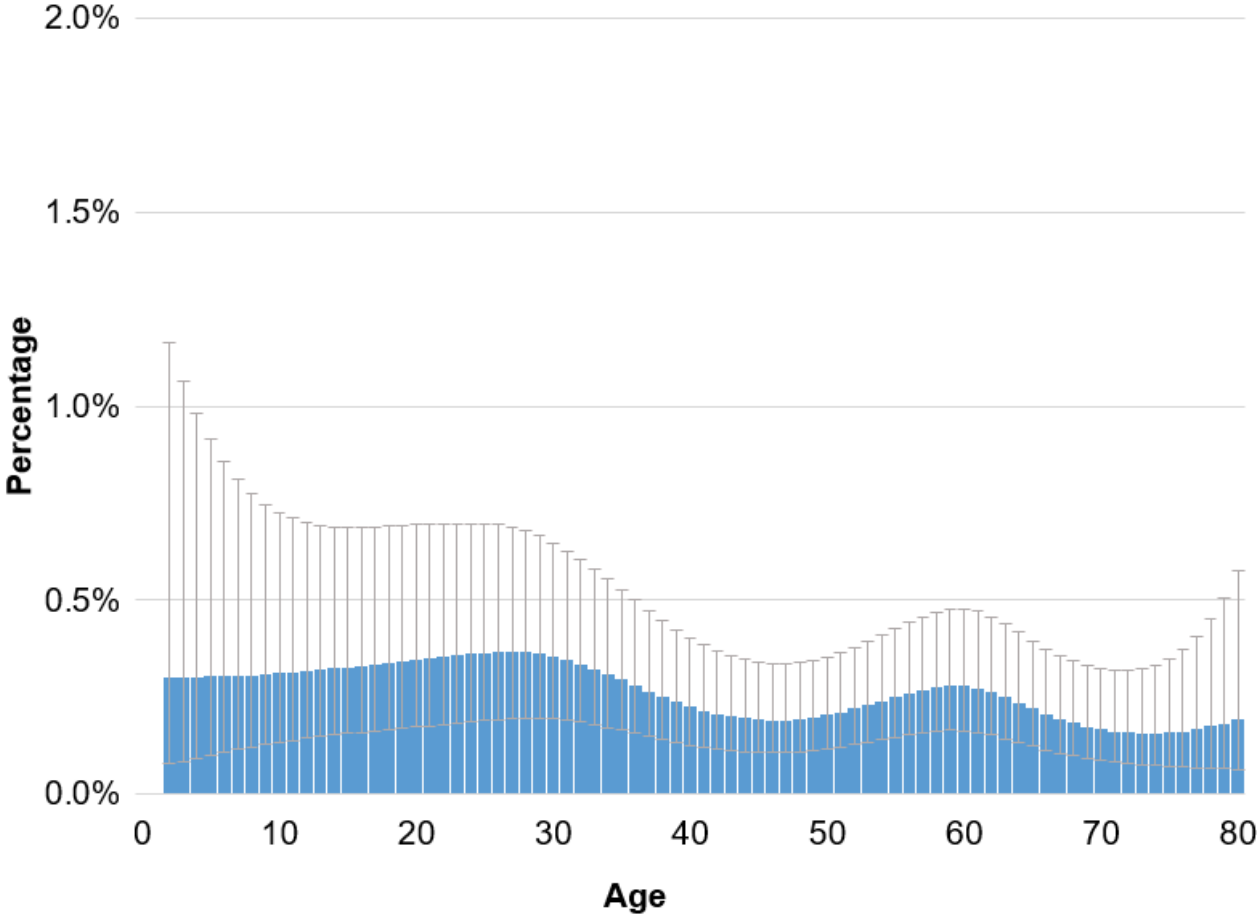
In the week ending 10 April 2021, the trend was uncertain for cases **compatible with the UK variant**.

## Percentage of people testing positive by age

Rates of positive cases vary by age, but appear to have decreased in all age groups in recent weeks.

Caution should be taken in over-interpreting any small movements in the latest trend, particularly where **confidence intervals** are large.

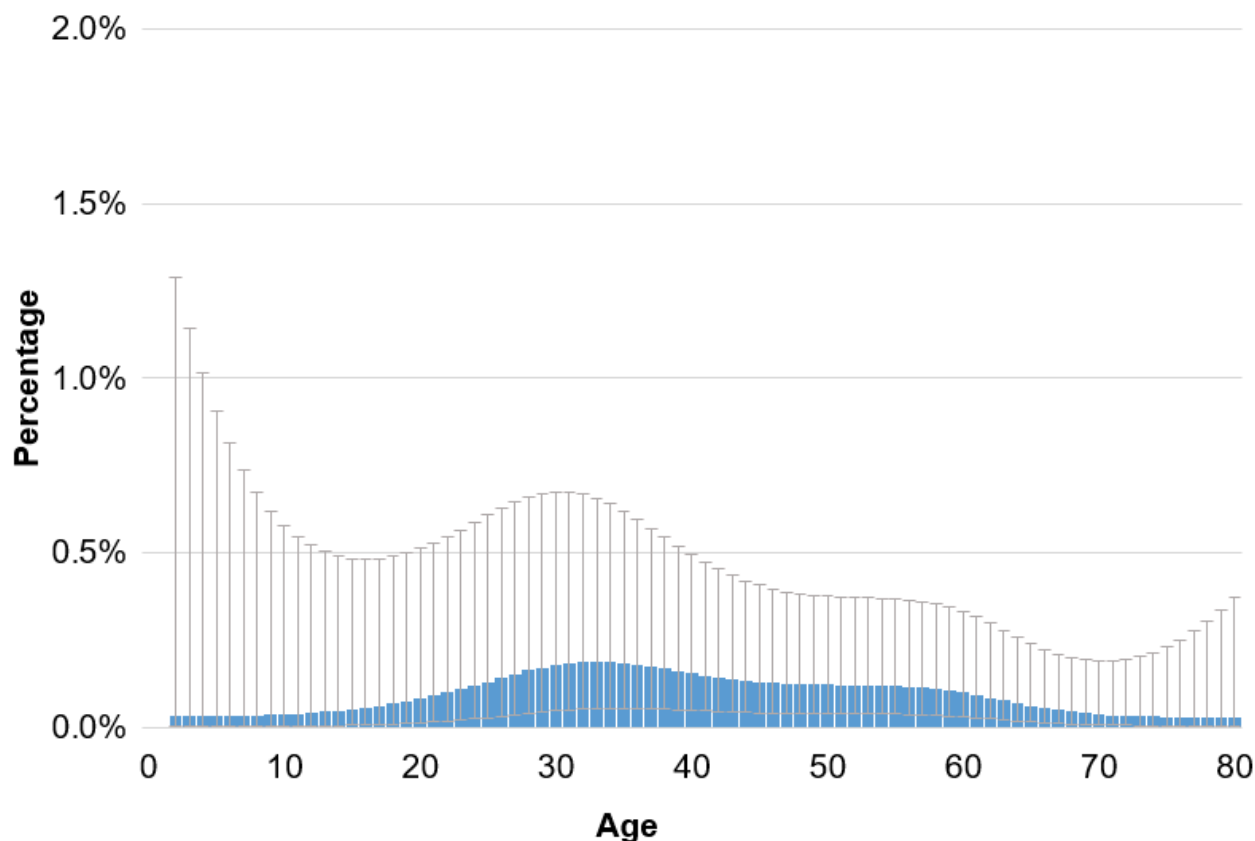
# Chart 2a: Estimates of the percentage of the population in Wales testing positive for the coronavirus (COVID-19) by age on 3 March 2021



Source: Coronavirus (COVID-19) Infection Survey, ONS

The blue bars give point estimates and the vertical lines indicate the 95% confidence intervals. Modelled estimates shown for single years of age (aged 2 to 80) on 3 March 2021.

## Chart 2b: Estimates of the percentage of the population in Wales testing positive for the coronavirus (COVID-19) by age on 7 April 2021



Source: Coronavirus (COVID-19) Infection Survey, ONS

The blue bars give point estimates and the vertical lines indicate the 95% confidence intervals. Modelled estimates shown for single years of age (aged 2 to 80) on 7 April 2021.

In the data used to produce these estimates, the number of people sampled in the different ages who tested positive for COVID-19 was lower relative to Wales overall. This means there is a higher degree of uncertainty in estimates for individual age groups over this period, as indicated by larger **confidence intervals**.

The percentage of people testing positive for COVID-19 by single year of age since 28 February 2021 for Wales, Northern Ireland and Scotland is provided in the **ONS dataset**.

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# Estimates for incidence in Wales

The incidence of new infections (the number of new infections in a set period of time) helps us understand the rate at which infections are growing within the population and supports the main measure of positivity (how many people test positive at any time, related to prevalence) to provide a fuller understanding of the coronavirus (COVID-19) pandemic.

To account for the increasing proportion of survey participants providing monthly (rather than weekly) swabs, the survey is using a new method for estimating the incidence of positive cases, based on the positivity estimate. The new method estimates how long people test positive for and uses this alongside the positivity model to estimate when new positive infections occurred.

The reference date used for the official estimates of incidence of positive cases is 10 days prior to the end of the positivity reference week, due to later dates being more likely to change.

For more information on the new method of estimating incidence please see the [updated methods article on the ONS website](#).

In Wales, during the week ending 3 April 2021, it is estimated that there were 0.77 new positive coronavirus (COVID-19) cases per 10,000 people per day (95% credible interval: 0.04 to 1.87).

This equates to 230 new positive cases in Wales per day (95% credible interval: 10 to 570).

Incidence of new positive cases appears to have remained level in recent weeks, although credible intervals are wide due to the smaller sample size, and care should be taken in interpreting results.

When prevalence is very low it may not be possible to produce a reliable estimate.

Indicative estimates are provided going back to 28 October 2020.

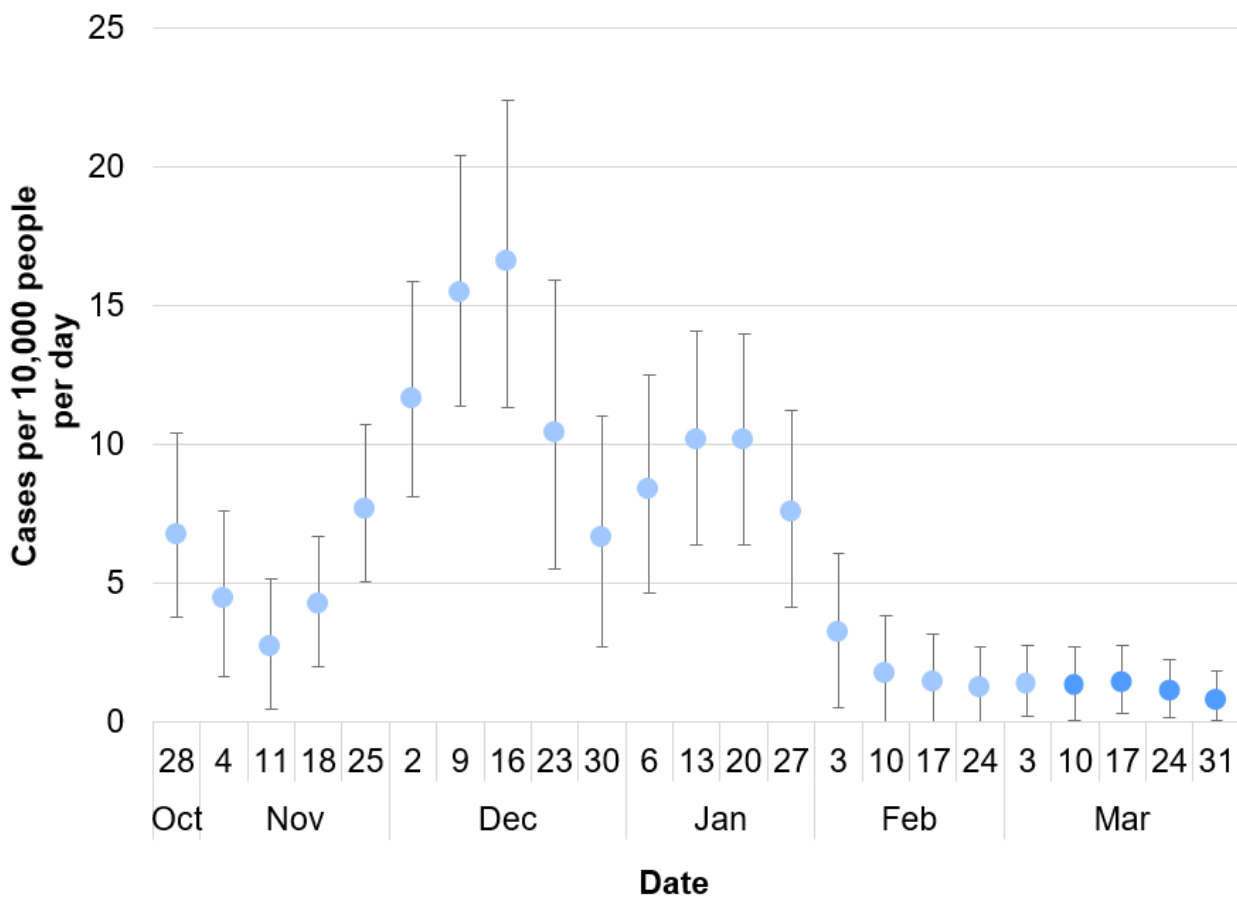
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### Chart 3: Estimates of incidence rates per 10,000 people per day since 28 October 2020



Source: Coronavirus (COVID-19) Infection Survey, ONS

The point estimate and error bars are unpublished indicative estimates (light blue) and the published official estimates (dark blue).

### Estimates for the countries of the UK

At the midpoint of the most recent week (4 to 10 April 2021) the highest estimated percentage of the community population with COVID-19 among the nations of the UK was in England (0.21%) and Scotland (0.20%).

Incidence of new positive cases was also highest in England and Scotland

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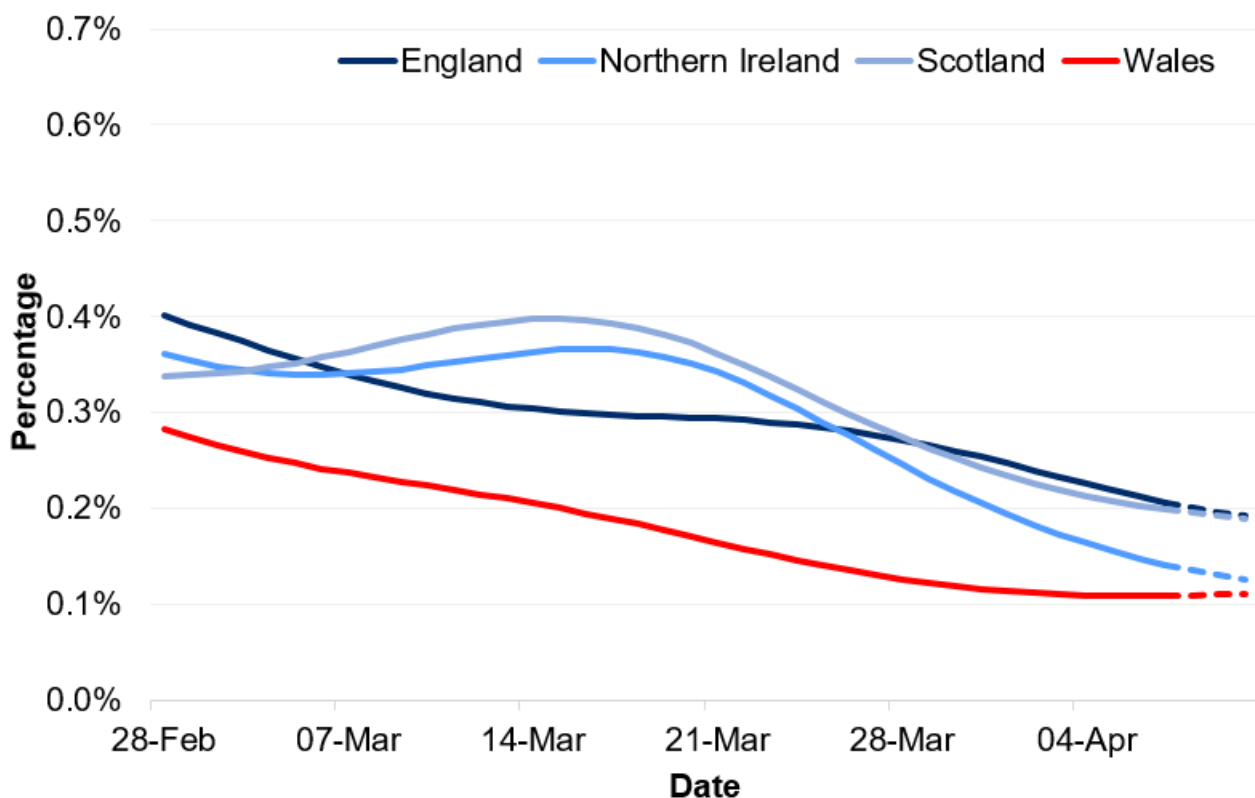
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during the week ending 3 April 2021.

There is some uncertainty around the individual point estimates for the nations. Estimates for the last few days of the series, shown as dashed lines in the chart below, have more uncertainty.

### Chart 4: Estimates of the percentage of the population in the UK countries testing positive for the coronavirus (COVID-19) on nose and throat swabs since 28 February 2021



Source: Coronavirus (COVID-19) Infection Survey, ONS

The lines represent the modelled trend based on the latest data. Estimates for the last few days of the series, shown as dashed lines in the chart, have more uncertainty.

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**Table 1: Positivity rates across UK countries for the week 4 to 10 April 2021**

	Positivity rates (95% Credible Interval)		
<b>Wales</b>	0.11% (0.05 to 0.20)	1 in 920 people (1 in 2,080 to 1 in 510)	3,300 people (1,500 to 6,000)
<b>England</b>	0.21% (0.18 to 0.24)	1 in 480 people (1 in 560 to 1 in 420)	112,600 people (96,700 to 130,100)
<b>Scotland</b>	0.20% (0.12 to 0.30)	1 in 500 people (1 in 820 to 1 in 340)	10,500 people (6,400 to 15,600)
<b>Northern Ireland</b>	0.14% (0.05 to 0.28)	1 in 710 people (1 in 1,890 to 1 in 360)	2,600 people (1,000 to 5,100)

Source: Coronavirus (COVID-19) Infection Survey, ONS

**Table 2: Official estimates of incidence rates across the UK countries, 28 March to 3 April 2021**

	Incidence (95% Credible Interval)	
<b>Wales</b>	0.77 cases per 10,000 people per day (0.04 to 1.87)	230 new cases per day (0 to 570)
<b>England</b>	2.04 cases per 10,000 people per day (1.64 to 2.47)	11,100 new cases per day (9,000 to 13,500)
<b>Scotland</b>	1.69 cases per 10,000 people per day (0.57 to 3.03)	890 new cases per day (300 to 1,600)

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**Incidence  
(95% Credible Interval)**

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<b>Northern Ireland</b>	0.89 cases per 10,000 people per day (0 to 2.89)	160 new cases per day (0 to 530)
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Source: Coronavirus (COVID-19) Infection Survey, ONS

## Definitions

### Community population

This survey covers people living in private households only and this is referred to as the community population. Residents in hospitals, care homes and/or other institutional settings are excluded.

### Confidence intervals

A confidence interval gives an indication of the degree of uncertainty of an estimate, showing the precision of a sample estimate. The 95% confidence intervals are calculated so that if we repeated the study many times, 95% of the time the true unknown value would lie between the lower and upper confidence limits. A wider interval indicates more uncertainty in the estimate. Overlapping confidence intervals indicate that there may not be a true difference between two estimates.

### Credible intervals

A credible interval gives an indication of the uncertainty of an estimate from data analysis. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.

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## Incidence

The number of new infections over a period of time.

## Modelled estimates

Estimates of positivity from this survey are based on statistical modelling of the underlying data. The model smooths the series to understand the trend and is revised each week to incorporate new test results.

## Point estimates

The headline point estimates are based on the modelled trend and are reflect the most representative reference point for the given week.

## Positivity rate

The estimated proportion of people who test positive for coronavirus (COVID-19) at a point in time, with or without symptoms, based on nose and throat swabs.

## Quality and methodology information

The results of the survey are based on self-administered nose and throat swabs provided by participants to the study. A subgroup of participants also provide blood test, taken by trained field staff.

As well as looking at overall **incidence**, **positivity** and antibody level, the survey will be used to examine the characteristics of those testing positive for COVID-19 and the extent to which those infected experience symptoms. The results are for private households only and do not apply to those in hospitals, care homes or other institutional settings. This is referred to as the **community population**.

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The survey covers all the countries of the UK, enabling estimates to be calculated for each country individually, and in time the UK as a whole.

Fieldwork started first in England on 26 April 2020 meaning there is more cumulative data available for England enabling more detailed analysis at present. Fieldwork began in Wales on 29 June 2020 followed by Northern Ireland on 26 July 2020 and Scotland on 21 September 2020.

It is important to note that there is a significant degree of uncertainty with the estimates. This is because, despite a large sample of participants, the number of positive cases identified is small. Estimates are provided with 95% **credible** or **confidence** intervals to indicate the range within which we may be confident the true figure lies.

The **modelled estimates** are carried out afresh each week using the previous 6 weeks' data. The model works by smoothing the series to understand the trend and is revised each week to incorporate new test results. This means that the latest estimate for an earlier period may be different to the official estimate that was produced at the time. Chart 1 shows the latest modelled trend and the official **(point) estimates** that were published at the time.

The Office for National Statistics (ONS) publishes **weekly statistical bulletins** and references tables and periodic **statistical articles** which include results for England, Wales, Northern Ireland and Scotland as they become available. The estimates for **Northern Ireland** and **Scotland** are published by the respective administrations, as we do here for Wales.

Further information about quality and methodology can be found on the **ONS website** and the survey pages on the **Oxford University site**.

## Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities

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and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators (“national indicators”) that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before Senedd Cymru. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being of Wales report](#).

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

## Next update

23 April 2021

## Contact details

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